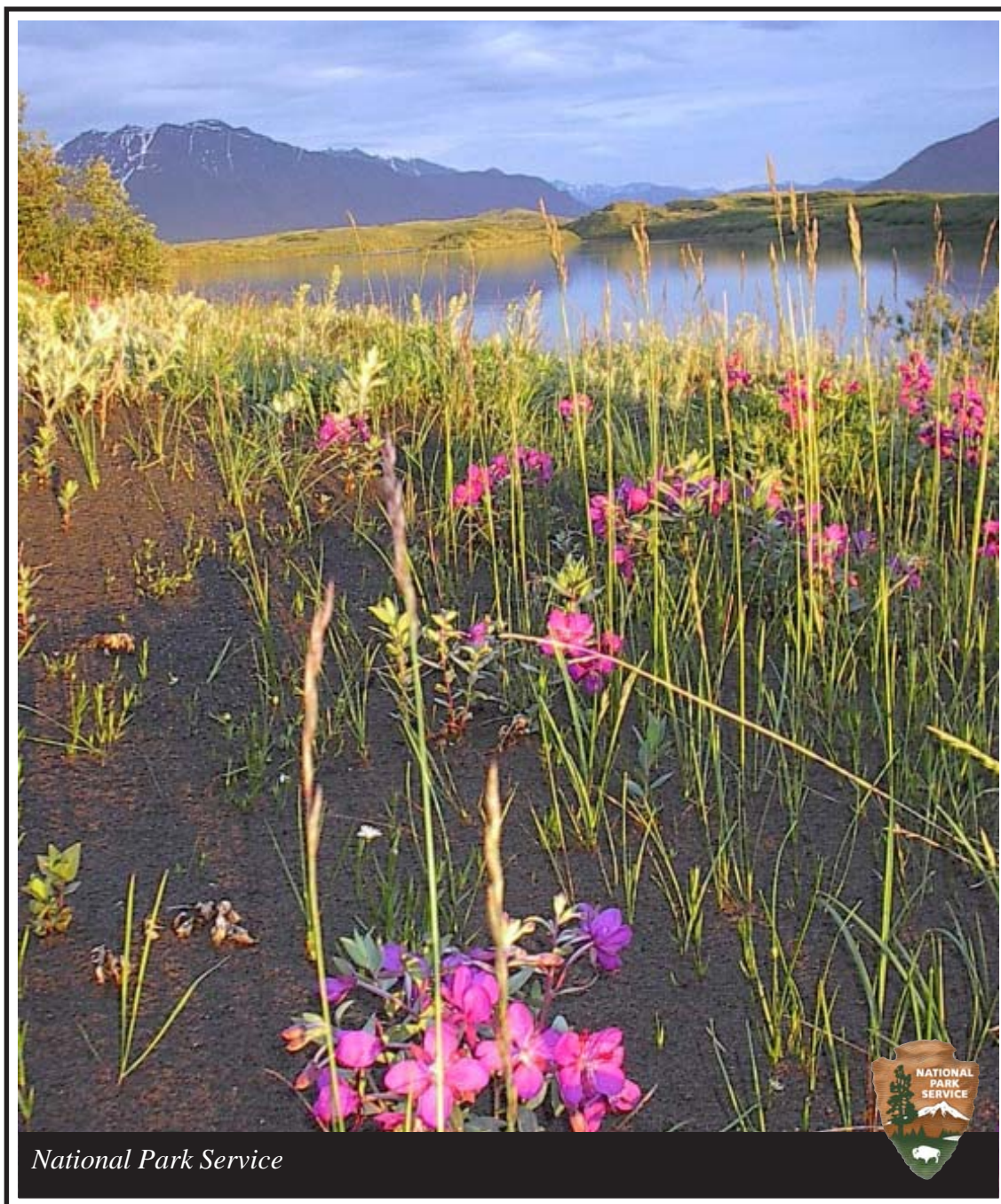
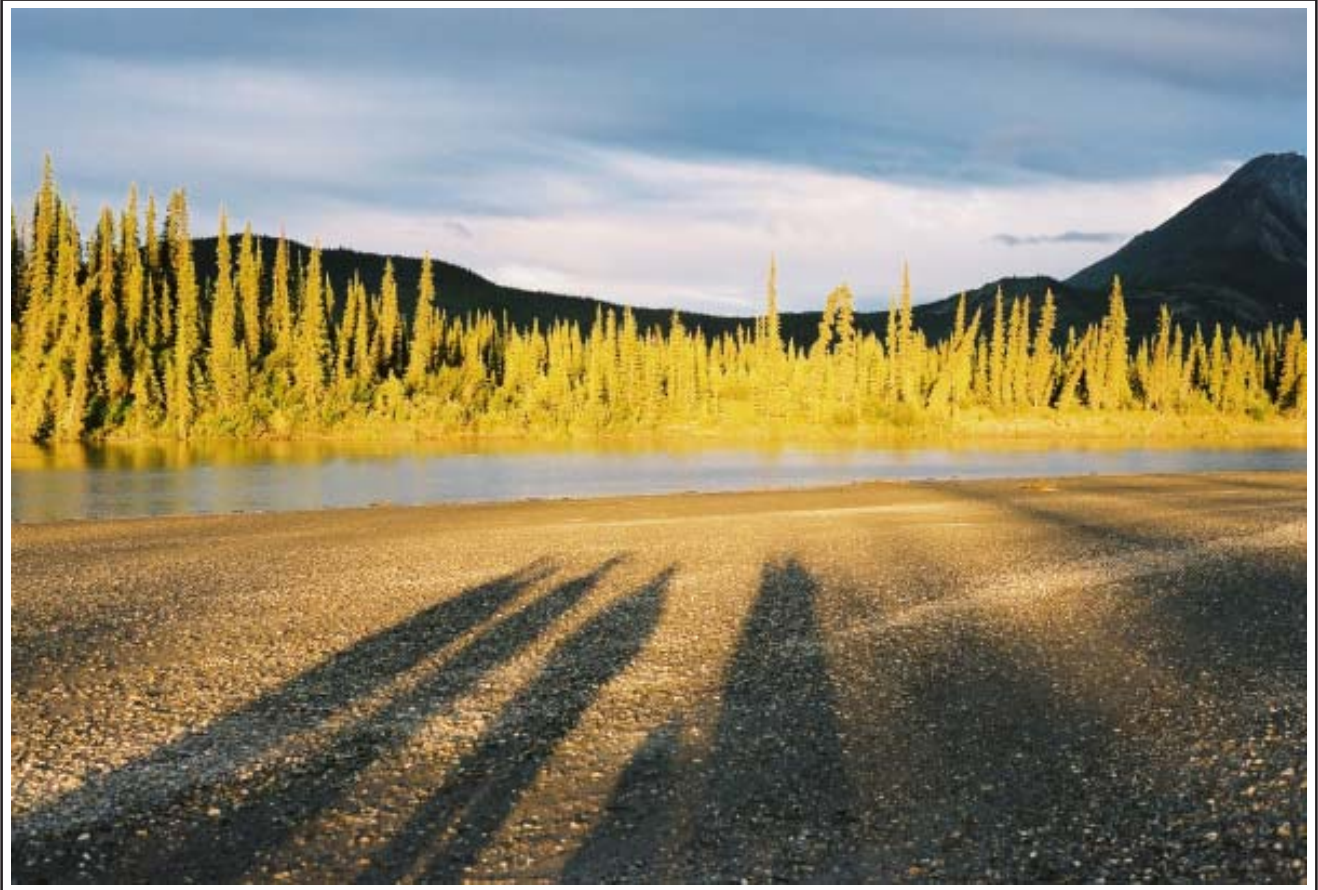


***Gates of the Arctic
National Park and Preserve
2003 Annual Report***



National Park Service



The Alatna River in Gates of the Arctic National Park and Preserve.

The Arctic has a call that is compelling. The distant mountains [of the Brooks Range in Alaska] make one want to go on and on over the next ridge and over the one beyond. The call is that of a wilderness known only to a few...This last American wilderness must remain sacrosanct.

William O. Douglas

Message from the Superintendent

The year 2003 continued to be an active and successful year of accomplishments toward preserving our country's heritage, represented in the superlative natural and cultural resources of Gates of the Arctic National Park and Preserve. Through these accomplishments we continue to gain increased public support for the protection of the values and resources in one of America's most remote and pristine national parks. We have made significant improvements in our understanding of the area's cultural and natural resources, in the ways we share this knowledge with the public, and in the effectiveness in which we preserve the park's nationally significant resources.

We are beginning to make dramatic improvements in many of our science programs. This year we launched a nationally funded program titled "Vital Signs Monitoring." This effort will develop a long-term ecological monitoring program that spans across the Brooks Range Mountains, including four other national park units across the arctic. We will attempt to improve our scientific efforts by moving beyond counting and locating wildlife populations to monitoring and understanding key vital signs as indicators of the ecological health of the natural system.

Our ability to understand the rich human history of the indigenous cultures in and around the park lands has been greatly improved with a new field archeology program that has begun to inventory the extensive landscapes throughout Gates of the Arctic, many that have never been surveyed before.

Park educational programs use this scientific information by making it available to the public, research organizations and management. This year we conducted educational outreach programs in many of the dozen communities located within or near Gates of the Arctic. Our three community-based operational centers in and around the park provide innovative educational opportunities for residents and visitors to the area. Partnerships with universities improved greatly this year when years of negotiations by the NPS resulted in the establishment of a Cooperative Ecological Study Unit (CESU) with the University of Alaska Fairbanks.

Research and education has improved our capability to take actions that result in better protection of the natural and cultural resources, as well as provide better appreciation and enjoyment of the park by visitors. We have a long history, beginning with the establishment of the Gates of the Arctic, in providing resource protection and visitor services from employees that reside in the small remote communities in or nearby the park. This on-site management has resulted in better community cooperation in protecting park resources and employees that are effective in resource preservation efforts. This also provides excellent visitor safety results. This year, because of our proactive local programs, we continued our record of no significant visitor accidents within the park.

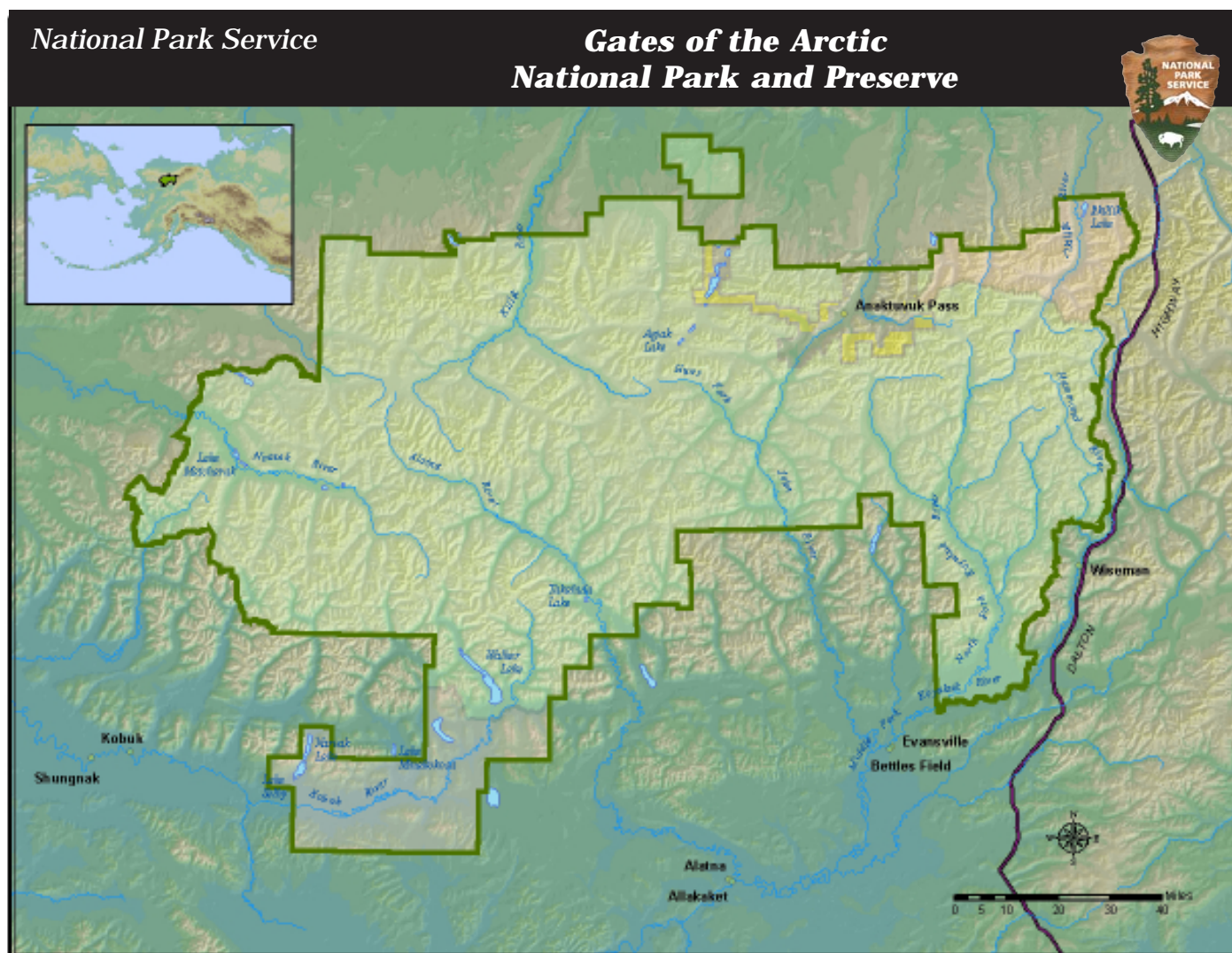
The following report is organized along the outline of the park's Strategic Plan and the structure of the "Government Performance and Results Act." It links our accomplishments to park missions, long-term goals and annual goals and also tracks measurable outcomes. This allows us to determine the effectiveness of our efforts in preserving the park unimpaired, for the benefit of future generations as well as the enjoyment of present generations.

In reading the following pages, I hope you will appreciate the hard work and dedication by employees, volunteers, numerous organizations and partnerships who have contributed their efforts in helping to achieve the important goals identified in our strategic plan.

Dave Mills
Superintendent

Purpose and Significance of Gates of the Arctic National Park and Preserve

By establishing Gates of the Arctic National Park & Preserve in Alaska's Brooks Range, Congress reserved a vast and essentially untouched area of superlative natural beauty and exceptional scientific value – a maze of glaciated valleys and gaunt, rugged mountains covered with boreal forest and arctic tundra, cut by wild rivers and inhabited by far-ranging populations of caribou, Dall sheep, wolves, grizzly and black bears. Congress recognized that a special value of the park and preserve is its wild, undeveloped character and the opportunities it affords for solitude, wilderness travel and adventure. Gates of the Arctic encompasses several congressionally recognized elements including the national park, national preserve, wilderness, six wild rivers and two national natural landmarks. The National Park Service is entrusted to manage this area to protect its physical resources and to maintain the intangible qualities of the wilderness and the opportunity it provides for people to learn and renew its values.

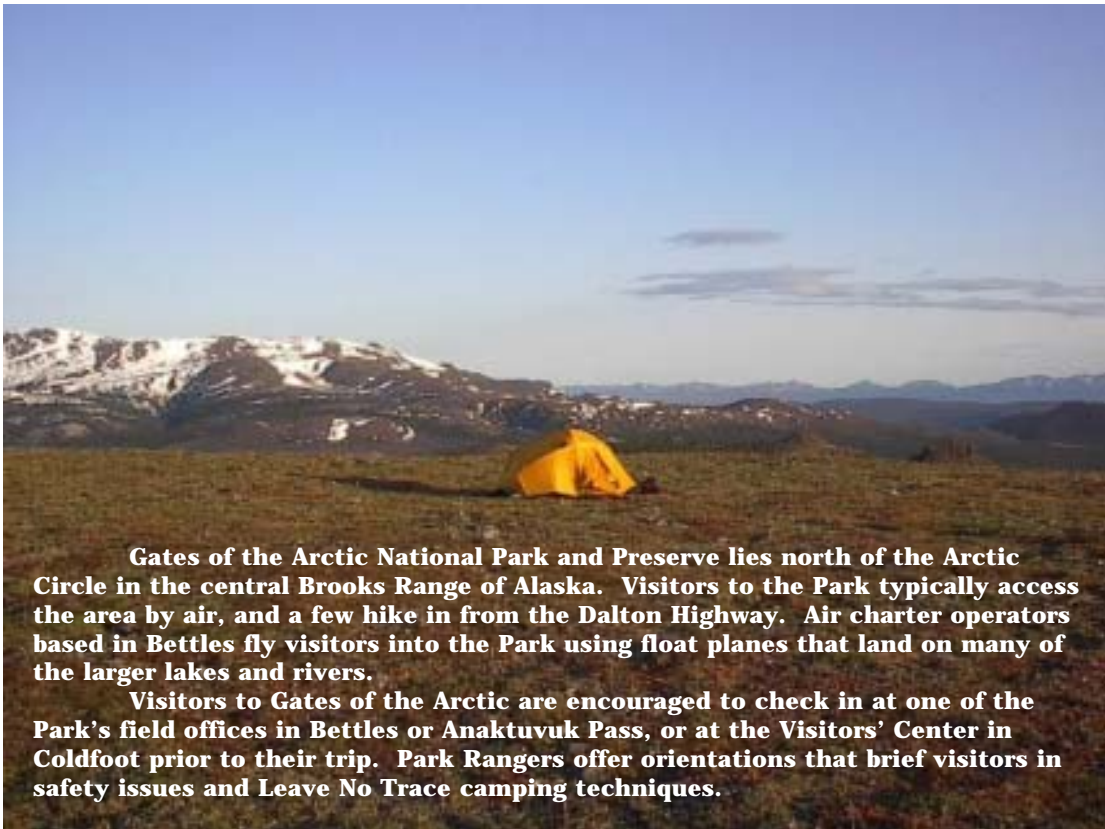


The Purpose of Gates of the Arctic National Park and Preserve is to:

- ❖ Preserve the wild and undeveloped character and natural environmental integrity – including natural processes, habitat and biodiversity – of the central Brooks Range;
- ❖ Provide opportunities for appropriate wilderness recreational activities and solitude; and
- ❖ Allow rural residents engaged in a subsistence way of life to continue to do so.

Gates of the Arctic National Park and Preserve has National Significance:

- ❖ Gates of the Arctic is the central component of a 40 million acre contiguous, undeveloped protected area, one of the largest protected areas in an increasingly developed world.
- ❖ Due to its vastness and undeveloped character, Gates of the Arctic provides outstanding recreational wilderness opportunities.
- ❖ Gates of the Arctic protects the core of the traditional homelands of the Nunamiut peoples.
- ❖ The area inspired Bob Marshall, who coined the term “Gates of the Arctic,” and was one of the earliest proponents of arctic preservation and one of the founders of the American wilderness system.
- ❖ Gates of the Arctic exemplifies an intact, high latitude arctic ecosystem with its corresponding natural processes, flora and fauna.



Gates of the Arctic National Park and Preserve lies north of the Arctic Circle in the central Brooks Range of Alaska. Visitors to the Park typically access the area by air, and a few hike in from the Dalton Highway. Air charter operators based in Bettles fly visitors into the Park using float planes that land on many of the larger lakes and rivers.

Visitors to Gates of the Arctic are encouraged to check in at one of the Park's field offices in Bettles or Anaktuvuk Pass, or at the Visitors' Center in Coldfoot prior to their trip. Park Rangers offer orientations that brief visitors in safety issues and Leave No Trace camping techniques.

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Cover photo: River beauty
blossoms along the Killik River.

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Preserve Resources

Mission Goal: Natural and cultural resources and associated values at Gates of the Arctic National Park and Preserve are protected, restored and maintained in good condition and managed within their broader ecosystem and cultural context.

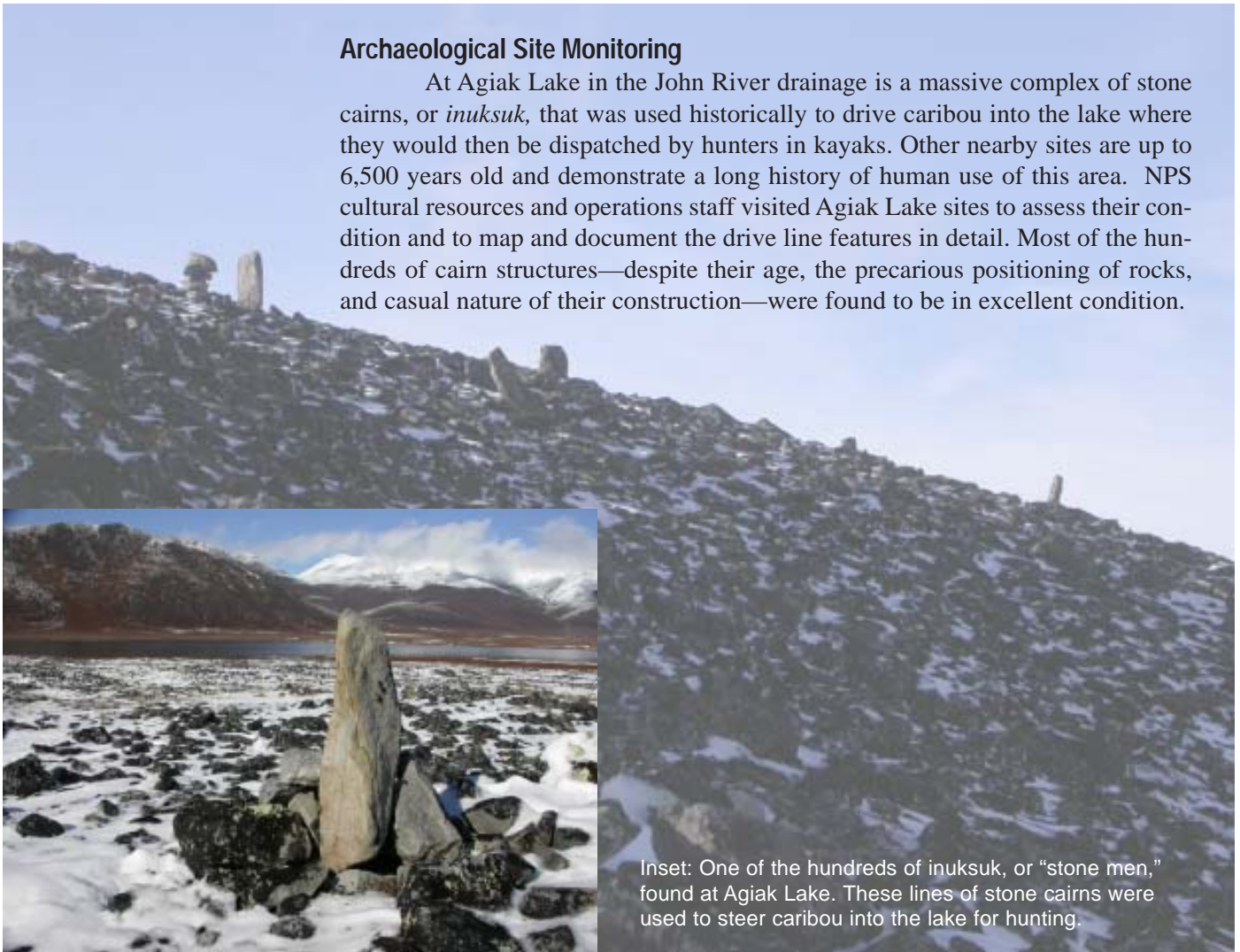
Long-term Goal: Archeological Sites. By September 30, 2005, 26 of the high risk sites will be monitored and condition determined.

Annual Goal: By September 30, 2003, seven sites (14 total) will be monitored and condition determined.

GOAL ACHIEVED

Archaeological Site Monitoring

At Agiak Lake in the John River drainage is a massive complex of stone cairns, or *inuksuk*, that was used historically to drive caribou into the lake where they would then be dispatched by hunters in kayaks. Other nearby sites are up to 6,500 years old and demonstrate a long history of human use of this area. NPS cultural resources and operations staff visited Agiak Lake sites to assess their condition and to map and document the drive line features in detail. Most of the hundreds of cairn structures—despite their age, the precarious positioning of rocks, and casual nature of their construction—were found to be in excellent condition.



Inset: One of the hundreds of inuksuk, or “stone men,” found at Agiak Lake. These lines of stone cairns were used to steer caribou into the lake for hunting.

Archaeological Reconnaissance on April Creek

During a brief inventory on April Creek and the Killik River, we gathered baseline information about the kinds of cultural resources present in this area and assessed potential impacts to known sites. Sixteen new sites were identified, including an impressive series of rock cairns that served as a caribou drive line, and several Arctic Small Tool Tradition sites that date from 4,200 to 1,100 years ago. A previously known Hungry Fox site was revisited and found to be in poor condition due to erosion by the Killik River. Plans to return to this important late prehistoric age Inupiat site are being discussed for 2004.



Nearly six feet tall and containing hundreds of stone slabs, this inuksuk, or “stone man,” is an exceptionally large and carefully built cairn. Thousands of inuksuk, built to serve as caribou drive lines, can be found all over Gates of the Arctic National Park and Preserve.

Alatna River Cultural Resources Inventory

The Alatna River, a 1.08 million-acre basin essentially unknown from a cultural resource standpoint, was the focus of a major cultural resources inventory in 2003. Only a handful of sites in the valley were known previously. The project identified a representative sample of



NPS archeology crew records information at a newly discovered site on the Alatna River. This site was a small camp from the Arctic Small Tradition, which dates to between 4200 and 1500 years ago.

the kinds of sites present in the area, providing insight into the history of human use of the valley. The Alatna, particularly the Arrigetch Peaks area, is one of the most visited parts of the Park and this project also determined if there were any human or natural impacts affecting sites.

A crew of 7 archaeologists—including students from University of Alaska Fairbanks, University Alaska Anchorage and Washington State University, and volunteers from the University of Alaska Museum—spent 4 weeks on the Alatna traveling by foot and raft. They dis-

Most sites were prehistoric stone tool scatters dating from a few hundred to perhaps 8,000 years ago.

covered and documented 40 new sites and revisited 3 previously recorded sites. Most sites were prehistoric stone tool scatters dating from a few hundred to perhaps 8,000 years ago.

Two components of the project were ethnographic background studies that describe traditional use of the Alatna from Nunamiut and Koyukon perspectives. The Simon Paneak Museum and Tanana Chiefs Conference were contracted for these studies.

Walker Lake Archaeological Survey and Monitoring

Walker Lake has been frequented by people for thousands of years, as evidenced by one of the highest densities of archaeological sites in the Park.

...we identified 17 new sites...

During a brief, 2-day survey, we identified 17 new sites, consisting of scatters of stone tools and flaking debris. Obsidian from a source near Hughes (approximately 60 miles away) is common in these sites, suggesting travel routes or trade links to the south. We also revisited 6 known sites, which were found to be in good condition.

In the 1960s and 70s, archaeologist Ed Hall collected several hundred artifacts from Walker Lake sites. This year, a student intern at the University of Alaska Museum transferred those artifacts from crumbling coin envelopes into clearly labeled polyethylene bags that will ensure the long-term preservation of the collections' research value.



An obsidian projectile point fragment from a newly discovered site near Walker Lake.



Archaeology/Cultural Resources Accomplishments

- Identified and documented 73 new historic and prehistoric sites, bringing the total of known sites in Gates of the Arctic to 863.
- Three volunteers this summer donated substantial time and expertise on archaeological projects—a total of 656 hours.
- Visited 18 known sites considered to be at high risk for impacts.
- Provided training opportunities and work experience for five graduate and undergraduate students.

Mission Goal: The National Park Service contributes to knowledge about natural and cultural resources and associated values; management decisions about resources and visitors are based on adequate scholarly and scientific information.

Long-term Goal: Natural Resources. By September 30, 2005, 8 natural resource inventories are completed for Gates of the Arctic.

**Annual Goal: By September 30, 2003, two additional populations' health will be reported as data bases (caribou and moose).
GOAL EXCEEDED**

Aerial Moose Survey in the Upper Kobuk

Reports from local residents that moose densities were low and declining in the upper Kobuk River drainage prompted the NPS to join forces with the Alaska Department of Fish and Game (ADF&G) to conduct an aerial moose survey in the drainage. Biologists conducted aerial surveys of the 4001 mi² area during November 2002 and March 2003.

...the [decline] in density of moose calves...is cause for concern, as is the overall low density of moose in the upper Kobuk River drainage.

The estimated calf:cow ratio was 20 calves per 100 cows and is comparable to the 19 calves per 100 cows ratio found in the Kobuk River drainage in 1995 (the last time a survey was conducted in this general area). The estimated bull:cow ratio was 92 bulls per 100 cows and is considerably higher than the 1995 estimate of 62 bulls per 100 cows.

We estimated the number of moose in the upper Kobuk River drainage to be roughly 856 moose, a density of 0.21 moose per mi² (down from 0.57 moose per mi² in 1995). There were about 91 moose calves estimated, at a density of 0.02 calves per mi² over the entire survey area (down from 0.06 calves per mi² in 1995).

While the actual numbers of moose in the area may vary from our estimates, the change in density of moose calves from 1995 to 2003 is cause for concern, as is the overall low density of moose in the upper Kobuk River drainage. An estimate of 0.21 moose per mi² is extremely low. Thus, we urge a conservative approach to managing moose in the upper Kobuk River drainage.

Accomplishments

- Increased our understanding of the upper Kobuk River moose population.
- Produced a final report of this study in October 2003.



Super Cubs lined up on the Dahl Creek airstrip, ready to fly the Kobuk River drainage moose surveys. Wing and engine covers kept the airplanes protected from the elements while on the ground. Deep, fresh snow provided good track visibility, although moose numbers were found to be extremely low.



Caribou from the Central Arctic Herd are being studied to investigate the effects of oil field development on calf production and survival. The Central Arctic Caribou Herd is one of three caribou herds that frequent Gates of the Arctic National Park and Preserve.

Effects of Oil Field Development on Calf Production and Survival in the Central Arctic Herd

Beginning in March of 2003, Gates of the Arctic joined the Alaska Department of Fish and Game (ADF&G), ConocoPhillips Alaska, Inc., the U.S. Bureau of Land Management, and the U.S. Fish and Wildlife Service in supporting a study investigating the effects of oil field development on calf production and survival in the Central Arctic Caribou Herd, one of three caribou herds that frequent the park. This project has 6 objectives: 1) estimate annual pregnancy and birth rates of caribou cows, 2) estimate survival of female calves to yearling age class

An aerial photocensus was conducted during July 2002. The herd was estimated at 31,857 caribou, an 18% increase from the 2000 census.

and determine causes of mortality, 3) estimate rates of growth and weight gain by calves during summer, 4) assess changes in location, physiography, and vegetation of calving sites among years, 5) monitor movements of caribou to determine winter and summer distributions, and 6)

estimate size of the herd at 2-year intervals using a complete aerial photocensus.

Fieldwork is scheduled to continue through 2005. Plans are moving forward to expand this study to use detailed data on caribou movements to develop spatially explicit models of caribou exposure to human caused disturbance. In addition to demographic and physiological data, detailed data on spring, summer, and fall movements will be collected and exposure of caribou and caribou population dynamics in relation to industrial activity will be investigated.

Accomplishments:

- Assessed pregnancy and birth rates;
- Estimated calf survival;
- Determined that predation was the most common cause of death for newborn calves;
- Recorded calf weights and metatarsus lengths;
- Recorded and photographed location and vegetation types of the initial capture sites of calves;
- Recorded and mapped distributions of collared calves;
- Conducted an aerial photocensus;
- Estimated the herd at 31,857 caribou, an 18% increase from the 2000 census.

Bird Inventory Projects

Many migratory bird species face widespread loss and alteration of habitat along their migration routes. Impacts of habitat loss are likely to be first detectable through changes in patterns of bird abundance and distribution on the breeding grounds. Gates of the Arctic continues to add to the knowledge base of the birds, many of which are migratory, that breed within its boundaries. This year, the NPS Inventory and Monitoring Program and the Park Flight Program provided support for bird inventories within the park. Fieldwork for a 3-year mountain-nesting bird inventory was completed (data analysis and a final report will be completed in 2004). We also ran a pilot landbird inventory this summer, with larger efforts scheduled for 2004 and project completion in 2005.

Prior to these efforts, Gates of the Arctic was largely un-surveyed, leaving a gap in our knowledge of the breeding distribution and habitat requirements of many migrant and resident bird species. Information from these inventories will provide valuable

baseline data on the breeding distributions and habitat associations of numerous species and will contribute to conservation efforts at multiple levels. At the park level, we will use baseline data in assessing the potential impacts to bird populations from human (e.g. increased visitation) and natural (e.g. flood, fire) disturbances. At the regional level, baseline data will be

Biological Technician Melanie Cook records habitat data for a pilot bird inventory project in the Killik River valley. Habitat data is an integral part of the bird inventory program at Gates of the Arctic.

incorporated into the statewide bird monitoring program, which focuses on assessing trends in abundance and distribution. And at the global level, data will be useful in assessing the health of migratory species throughout their ranges.

Long-term Snowshoe Hare Study Expands

The 2003 snowshoe hare survey marks the seventh year of tracking the hare population near Wiseman, Alaska in Gates of the Arctic. We found that the hare population in our study area was at very low levels this year, similar to the level the population was at when we began the study in 1997. Two counts in early February revealed no hare tracks along the entire survey route, and another two counts in mid March found only 1-3 tracks in just two of the six habitat types.

What began as a simple track count survey to provide managers with an index of the snowshoe hare population at each stage of this cycle has evolved into a multifaceted study. With additional funding and a commitment from the University of Alaska Fairbanks, we are expanding the project's scope in order to investigate the observed relationships between snowshoe hares and particular mineral soils that hares sometimes consume at peak population levels, vegetation and associated antiherbivory compounds, and the health of the lynx population.



A swath of dead willow branches is visible throughout the snow-shoe hare study area. During the winter, this swath lies from snow level to about 1 m above snow level, the height hares can reach on their hind legs. Hares consumed nearly all available vegetation during the recent population peak. Looking more closely at the vegetation is one part of the multifaceted study taking shape in cooperation with the University of Alaska, Fairbanks.

History and Environmental Impacts of Technical Climbing in the Arrigetch Peaks

The spectacular granite cliffs and spires of the Arrigetch Peaks is a premier climbing destination in the Brooks Range of Alaska, and a significant feature of the mountaineering culture in North America. The 37,400-acre area was designated a National Natural Landmark in 1968. In 1981, the Alaska National Interest Lands Conservation Act established Gates of the Arctic National Park and Preserve, with the Arrigetch Peaks well within its boundaries. The legislation directs the National Park Service “to provide continued opportunities, including reasonable access, for mountain climbing, mountaineering....” With the support of the National Natural Landmark Program, we initiated a project to consolidate some of the known climbing history of the area and to investigate the impacts of climbers on the environment.

Technical climbing in the Arrigetch Peaks began in the early 60’s. Although climbing activity has increased in recent years, climbing is still not a common activity in Gates of the Arctic, and accounted for less than 2% of park visitors from 1997 to 2000.

Potential impacts from climbers include campsites, trails, and wildlife encounters, as well as pitons, bolts and slings left upon descent. Camping impacts from climbers are hard to differentiate from those of backpackers. During the 2003 field work, we noted four impacted campsites and all are likely used by both hikers and climbers. The potential for camping impacts from climbers are great. Due to the additional weight and time it takes to haul climbing gear, as well as the likelihood of poor weather, climbing parties typically stay up to a month in the area. Changes in ethics of climbers over time have been positive however, as modern standards emphasize non-destructive climbing protection, and cleaning routes of hardware and webbing slings. Modern standards de-emphasize the construction of “base-camps”, cairns and summit registers. Current norms encourage greater mobility thereby decreasing the length of stay at any given campsite.

In general, climbing impacts in the Arrigetch are presently minimal. Promotion of high standards of behavior in climbers will help retain the wilderness character of climbing in the Arrigetch.

Wildlife, loose rock, and the potential for snow at any time of year are among the environmental hazards of climbing in the Arrigetch Peaks of Gates of the Arctic National Park and Preserve. These circumstances, and the fact that routes are exploratory and undocumented, require a high level of expertise and self reliance on the part of the climbing party.



Cleanup on the Wild John River

In partnership with the Community of Anaktuvuk Pass and the Sierra Club, the NPS initiated a cleanup effort along the upper John River this summer. Local residents were hired to transport trash to a staging area at the edge of town where the North Slope Borough then trucked the garbage to the new landfill. Cleanup of the upper John River has greatly benefited the aesthetic and environmental condition of the Wild John River. This project has also helped build relationships between the Sierra Club, the community of Anaktuvuk Pass and the National Park Service.



Sierra Club volunteers pose with a pile of garbage bags. A total of 70 large trash bags were removed from the John River valley, weighing roughly 1,750 lbs.

*Leave it as it is. The ages have been at work on it
and man can only mar it.*

Theodore Roosevelt (1903)



Field staff members Nancy Pfeiffer, Scott Schoppenhorst, and Dave Krupa clean, cut and stack barrels for transport to Bettles. A total of 180 barrels were removed from Walker Lake.

Walker Lake Shoreline Restoration Project

Following the purchase agreement between the NPS and the original owners, the retaining wall at the old Walker Lake lodge site was removed. A total of 180 barrels were removed from the site. The drums were transported to Fairbanks for recycling.

About two cubic yards of contaminated soil was also discovered at the site. The soil was placed in a lined, covered containment area uphill of the old lodge site. The soil will be allowed to aerate next summer and tested for contaminants. Additional work, including restoration of the shoreline, still needs to be done.

The main highlight of the project was the cooperation between local private individuals and the National Park Service. The effort also had interdivisional cooperation, including rangers, maintenance staff and Fairbanks resource personnel.

Collections: for Research and Learning

Gates of the Arctic maintains a collection of over 38,000 historical objects, photographs, archival materials, and archaeological, botanical, and paleontological specimens. These items have been collected during the course of research and management activities in the Park or are donations related to the cultural and natural history of park lands. The NPS intends to store these collections for perpetuity and to encourage their use in research and learning. Among the collections at Gates of the Arctic are thousands of prehistoric stone tools, ethnographic collections made by Bob Marshall in the 1930s, Nunamiut oral history recordings, and an extensive collection of arctic plants, mosses and lichens. Learn more about our collections at www.cr.nps.gov/museum/collections/gaar.



Our collection contains recent examples of native crafts like these wooden snow goggles.



Example of an historic photo held in our collections. This one is from a 1945 USGS expedition down the Chandler River. Photo is of a Nunamiut kayak frame which was used in the last documented kayak and spear caribou hunt at Little Chandler Lake.



Bob Marshall collected a number of historic and ethnographic items, like this plumb bob, in the 1930s.

Among the collections at Gates of the Arctic are thousands of prehistoric stone tools, ethnographic collections, Nunamiut oral history recordings, and an extensive collection of arctic plants, mosses and lichens.



A caribou jaw bone from the 8000 year old Tingmiukpuk site on the Killik River.



Cover of *Life* magazine from 1947 that featured a story about the Helmericks living on the Alatna River in the 1940s.

Museum Collections Accomplishments:

- Installed UV filtering material on light fixtures to meet NPS Museum Handbook standards.
- Secured open shelving units to wall to prevent tipping in the event of an earthquake.
- Implemented monitoring program to detect evidence of insects, mold, and rodent infestations in storage space.
- Implemented program to regularly monitor environmental conditions in storage space.

Long-term Goal: Ethnographic Resource Baseline. By September 30, 2005, the number of Gates of the Arctic ethnographic resources inventoried, evaluated, and entered on the National Park Service Ethnographic Resources Inventory (ERI) is increased from 0 in FY1999 to 2.

Annual Goal: By September 30, 2003, two ethnographic resources are inventoried, evaluated, and entered into the ERI.
GOAL ACHIEVED

Project Jukebox Gets Even Better

Beginning in the early 1990's and in cooperation with the University of Alaska Fairbanks Oral History Program, NPS sponsored the development of multimedia oral history databases that allow park planners, staff, local communities, and virtual visitors to hear and experience accounts of life in and around Alaska's premier parks and preserves. These "Jukebox" projects integrate oral recordings with maps, pictures, and text in an interactive computer program.

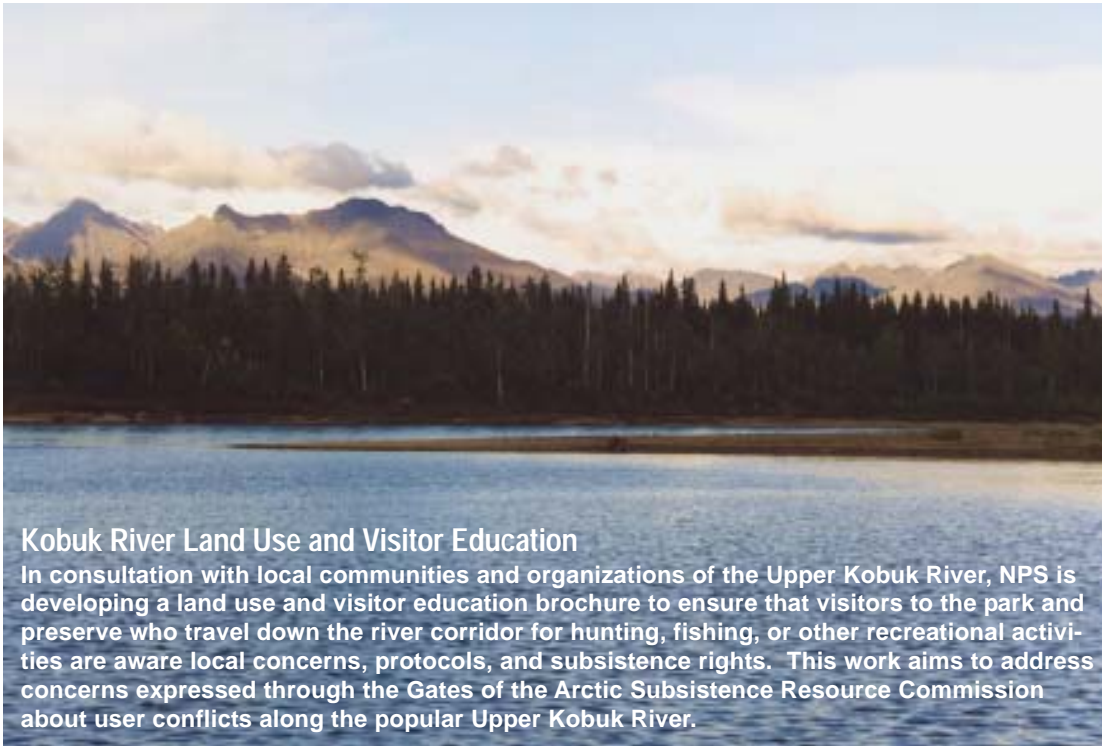
In 2003, six new interviews were conducted for inclusion in a revised Gates of the Arctic Jukebox. Materials from all Park-based Jukeboxes have been converted to a web accessible format for possible internet delivery, and discussions are underway with participant communities to address sensitive issues surrounding intellectual and cultural property rights in the era of internet access.

Accomplishments:

- Conducted additional interviews for inclusion in a revised Gates of the Arctic Jukebox;
- Converted materials from all park-based Jukeboxes to a web accessible format.



Steve Grubis tells a story from his many years of remote living in the arctic. Steve and his wife, Kay, shared stories and observations during interviews with Project Jukebox. They have lived over two decades at Takahula Lake in Gates of the Arctic National Park and Preserve.



Kobuk River Land Use and Visitor Education

In consultation with local communities and organizations of the Upper Kobuk River, NPS is developing a land use and visitor education brochure to ensure that visitors to the park and preserve who travel down the river corridor for hunting, fishing, or other recreational activities are aware local concerns, protocols, and subsistence rights. This work aims to address concerns expressed through the Gates of the Arctic Subsistence Resource Commission about user conflicts along the popular Upper Kobuk River.

Ethnographic Studies on the Kobuk River

Kobuk Human-Land Relationships

The Kobuk human-land relationships study is a multi-year project being carried out jointly by NPS, Alaska Department of Fish and Game (ADFG), and the Shungnak Village Council to document a range of understandings about the land and resources upon which people of the upper Kobuk River depend. Oral recordings, life histories, and genealogical data are being collected and analyzed to help refine our understanding not only of traditional Kobuk culture but also the enormous changes that have occurred there, the different and sometimes conflicting understandings between generations, and the (often) inadvertent effects of outside management/regulatory mandates on rural communities along the Kobuk. Jim Magdanz, of ADFG in Kotzebue, is the project's principal investigator. Magdanz recently provided a year 2 report which discusses progress and summarizes data collected in the second year of the Kobuk Human-Land Relationships project. In the second year, four elder respondents from Shungnak, Alaska, were interviewed: Margaret Sheldon, Neal Sheldon, Daisy Tickett, and Wilson Tickett. The year 3 report, summarizing new work with community residents, is due shortly.

Upper Kobuk Whitefish Project

The upper Kobuk whitefish project is an NPS sponsored Traditional Ecological Knowledge study aimed at documenting local knowledge of whitefish along the upper Kobuk River. Susan Georgette of Alaska Department of Fish and Game in Kotzebue has been working to document the detailed knowledge of Kobuk River residents concerning this culturally and practically significant food resource. Georgette completed the fieldwork for this project in 2003.



Whitefish are an important food resource, both culturally and practically, for residents of the upper Kobuk River.

Backcountry Management Planning

Gates of the Arctic National Park and Preserve is one of the world's premier wild and undeveloped protected areas. This area of the Central Brooks Range has long been renowned in literature and human imagination as a paramount arctic wilderness and homeland of northern Alaska Native cultures. Robert Marshall extolled the virtues of this area in his popular books of the 1930s, recounting his adventures in what was then a blank area on maps. But, of course, it had long been an intimately known landscape of "gaunt beauty and tenuous life" for hundreds of generations of pre-Athapaskan and Inupiat cultures.

In 1986, nearly 8 years after the park was set aside by the Alaska Lands Act, a General Management Plan (GMP) was developed to identify issues and describe general strategies for resource conservation, appropriate facilities, commercial services and human uses. This plan has served as a useful guiding document but does not provide specific standards for visitor use management and preservation of wilderness character. Recent NPS planning direction emphasizes the fundamental importance of establishing "desired future conditions" (in terms of resource condition and visitor experience) for distinct areas in the park in order to provide an overarching context for management decisions.

Interested public examine maps at a scoping meeting for Gates of the Arctic's BMP in Anchorage.



In 2002, the Alaska Region embarked upon an integrated planning approach for several large park areas in order to update these plans and provide more specific management direction that will meet the challenges of today. The most appropriate way to do this was to amend the existing GMPs with Backcountry Management Plans using the Environmental Impact Statement (EIS) process. Open-house style issue scoping meetings in Juneau, Anchorage, Fairbanks and Seattle were in collaboration with 3 other Alaska parks in order to ease the burden on the

public and to emphasize consistency in approach and terminology.

The plan will be *generally* consistent with the 1986 GMP but will amend it in significant ways. Specific issues the plan/EIS will likely address are:

- ❖ general aviation
- ❖ commercial air tours
- ❖ hiking, backpacking, ski-touring, camping, non-subsistence hunting and fishing
- ❖ climbing and mountaineering
- ❖ commercial uses (including commercial guiding)
- ❖ cabin use
- ❖ motorized recreational uses
- ❖ soundscape management
- ❖ research
- ❖ administrative uses and facilities

The "backcountry" is defined to include all public lands within the park and preserve as there are no developed areas within the boundaries. Nearly all of the park acreage is designated wilderness in Gates of the Arctic.

Several research projects culminated in 2003 with useful survey data explaining visitor experiences and values for Kobuk River sport hunters, wilderness recreationalists and visitors encountering subsistence activities in the park and preserve. Through voluntary registration and providing bear resistant food barrels the NPS has gained a much better understanding of backcountry visitor numbers, access portals, patterns of use and expectations. These data provide an important foundation for this backcountry plan.

Nearly 1,600 people and organizations submitted comments during the several months of scoping. Those comments along with our knowledge of the environment and natural processes of this place and constraints of law and policy are currently being merged into a draft range of management alternatives. Until several key planning issues and interpretations of the Alaska Lands Act in Denali National Park's draft Backcountry Management Plan/EIS are resolved our plan will be on hold. The success of the plan to preserve the Gates of the Arctic Wilderness requires a certain level of consistency in policy interpretation, management area prescriptions and terminology.

Provide for the Public Enjoyment and Visitor Experience

Mission Goal: Visitors safely enjoy and are satisfied with the availability, accessibility, diversity, and quality of park facilities, services, and appropriate recreational opportunities.

Long-term Goal: Visitor Satisfaction. By September 30, 2005, 95% of visitors to Gates of the Arctic are satisfied with appropriate park facilities, services, and recreational opportunities.

Annual Goal: By September 30, 2003, 92% of the visitors will be satisfied with the services of the park. This will be determined by survey results.

GOAL EXCEEDED

Satisfied Visitors Return from Gates of the Arctic National Park and Preserve

Based on a survey conducted by the University of Idaho, 97% of visitors were satisfied with the services of the park, rating the overall quality of facilities, services and recreational opportunities as "very good." We will let the survey speak for itself. Here are a few comments from visitors following their experiences in Gates of the Arctic:

"Great park, very friendly staff. All in all, a great NPS unit! Thanks!"

"The Gates has enormous national significance. There is nothing like it in the Lower 48. More of this awesome land should be protected...."

"Rangers (were) very helpful, especially the backcountry orientation...."

"(Gates of the Arctic is) for adventurous people to experience the last great wilderness areas of the U.S."

Long-term Goal: Visitor Safety. By September 30, 2005, the number of visitor accidents is no higher than the FY1992-FY1996 five-year annual average of 1.

Annual Goal: By September 30, 2003, Gates of the Arctic will have 1 or less visitor accidents.
GOAL ACHIEVED

Backcountry Safety and Leave No Trace

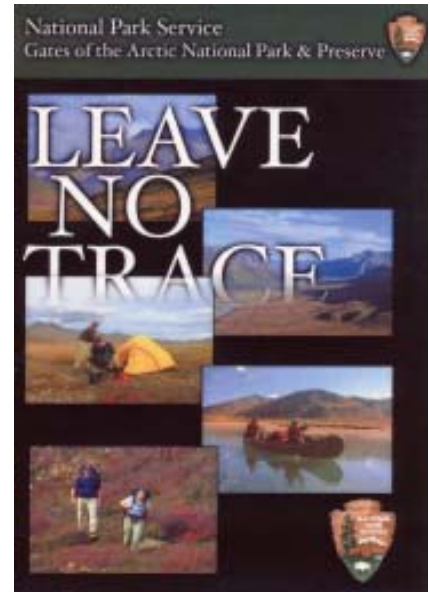
The Backcountry Safety and *Leave No Trace* Orientation continues to be the keystone of our resource and visitor protection efforts. By promoting “best practices” we strive to ensure visitor safety and enlist our visitors as our partners in protecting park resources. This year we increased our efforts to provide backcountry safety information and promote *Leave No Trace* by introducing the “Guardians of the Gates” program and by offering a “mail out” loaner program of our new Gates of the Arctic Backcountry Safety *Leave No Trace* video.

The “Guardians of the Gates” program was developed to inspire park visitors to be stewards of the land with a vested interest in protecting resources. As part of our visitor registration, we request that visitors receive a Backcountry Safety and *Leave No Trace* Orientation before venturing into the Park. When visitors complete their orientation they receive a Guardians of the Gates patch and a hunter orange *Leave No Trace* bandana. By becoming a Guardian of the Gates the visitor acknowledges that their personal safety and participation in resource protection are important to maintaining healthy, intact ecosystems and quality wilderness experiences for generations to come.

With funding provided by the Fee Demonstration Program, Gates of the Arctic Park Rangers and Aurora Films produced a 33-minute Backcountry Safety and *Leave No Trace* video. The video was created to be a visitor’s guide to planning an adventure in Gates of the Arctic wilderness with information about backcountry safety in Alaska’s Brooks Range and *Leave No Trace* principles and best practices for Arctic environs. The video loaner

program enables visitors to better plan and prepare for their visit to the park. The video introduces visitors to the ideas and principles of *Leave No Trace* and the importance of taking a personal role in preserving the wilderness character of the park.

The park received the final product in 2002 and launched the loaner program in the spring of 2003. The Backcountry Safety and *Leave No Trace* video loaner program is advertised on our park website and is promoted to visitors who inquire about other trip planning information. Since launching the program this spring, the park has loaned out 25 videos. The video is also shown on-site at the Bettles Ranger Station, the Anaktuvuk Pass Ranger Station and the Arctic Interagency Visitor Center in Coldfoot.



Backcountry Safety Accomplishments

- Established the Guardians of Gates/Leave No Trace Incentive Program
- Launched the Backcountry Safety and Leave No Trace video loaner program. Twenty-five videos were sent out this summer.
- Conducted Backcountry Safety and Leave No Trace Orientations for 85 groups, reaching 625 individuals.
- Purchased 22 new bear resistant food containers (BRFCs).
- Provided BRFCs to 130 groups.

Gates of the Arctic is a remote wilderness where even simple mistakes can become emergencies. It is also a fragile arctic ecosystem where humans can unknowingly cause great damage to park resources.



Agiak Lake cabin cleanup.



"Pack Ranger" Seth McMillan during the Portage Pass cleanup.



Recovering an abandoned cataraft after a mishap on the North Fork.

Backcountry Operations

Rangers and volunteers worked 490 days in the backcountry this year, patrolling over 1400 miles by foot, canoe and snowmachine. We visited all six of the park's wild rivers, hiked four of the popular cross-country routes and visited both of the National Natural Landmarks with in Gates of the Arctic.

The operations staff continues to work hard to protect park resources, maintain its pristine wild character and to improve visitor experiences. Clean up missions tend to be one of our primary focuses in field operations. This year, volunteers, rangers and resource staff facilitated the removal of over 11,750 lbs of trash and abandoned property from the Anaktuvuk Pass area, upper John River, Walker Lake, Kutuk Pass and along patrol routes in many of the park drainages. As a result of our field operations, rangers were able to reduce 30 camp site impacts, pick up 2,380 pieces of trash, assess 81 Brooks Range Impact Monitoring sites and visit 19 cabin sites, as well as contact 119 park visitors.

With only five commissioned law enforcement officers to patrol eight million acres, Gates of the Arctic law enforcement rangers have a vast area to patrol. Nevertheless, eight incidents required law enforcement action, in-

cluding: commercial operation without a permit, taking illegal wildlife, hunting without a license, driving overland with an airboat, damage to government property and misuse of government property. Further development of the law enforcement program will foster a greater presence and improve compliance with park regulations.

During hunting season this year, we contacted 75 sport hunters and 11 subsistence users in an effort to improve hunter compliance with applicable state and federal regulations. Rangers continue to promote minimum impact camping practices when talking with sport hunters and subsistence users in an attempt to reduce the impacts that have traditionally been associated with these two groups during hunting season.



Successful sheep hunters in the Itkillik Preserve.

Search and Rescue

In June, operations staff responded to a boating mishap. A father and son had attempted to float the North Fork of the Koyukuk River very early in the season. Unfortunately, the two encountered an ice shelf spanning the entire river channel. Caught by surprise, the paddlers capsized and were pulled under the ice with the current. Miraculously, the two survived but lost all their gear. They spent four days without food or shelter before being spotted by a local bush pilot. With the assistance of the local pilots, NPS rangers coordinated a rescue that involved state troopers and a military helicopter medical unit.

A second incident on the North Fork occurred just two weeks later when a family of inexperienced boaters collided with a river sweeper and punctured their raft leaving them stranded. To ensure their safety, rangers assisted in delivering them another raft and a local guide to lead them back to Bettles.

In July, Jerry Sinor, 68, of Colorado, died of natural causes on the upper Alatna River while on vacation with his younger brother. Sinor had been suffering from Parkinson's disease and terminal cancer, and had aspired to float the Alatna River before succumbing to his ailments. NPS rangers, state troopers, air taxis and local residents all assisted in removing Sinor's body and providing support to his grieving brother.

In late August, the Rescue Coordination Center in Anchorage notified the NPS that an aviation emergency locator transmitter signal was being detected near the Nigu River inside the park. Operations staff responded with an aerial search of the area that turned up no evidence of a crash. The ELT signal vanished several hours later. Fortunately, nearly all such signals are false alarms.

The Alatna River valley. Jerry Sinor, who died of natural causes, had hoped to float the Alatna before his death. His last days were spent on the beautiful Alatna. We hope he fulfilled his dream.



Emergency Medical Services

Currently, Gates of the Arctic operations staff includes three nationally certified EMTs. Rangers constantly train and prepare to meet medical emergencies in the park and work to upgrade and improve medical equipment whenever possible. We are pleased to report that only two park visitors enlisted emergency medical services this year, receiving treatment for exposure and abrasions.

On November 4th 2002, a commuter plane made an emergency stop in Bettles where NPS EMT Seth McMillan, in cooperation with the Frank Tobuk Health Clinic, assisted in an emergency child birth.. Glenda Mekiana, a resident of Anaktuvuk Pass, gave birth to Robert Mekiana in the back of a Cessna Caravan enroute from Anaktuvuk Pass to Fairbanks.

Accomplishments

- Outfitted the Bettles, Anaktuvuk Pass, and Coldfoot ranger stations with fully functional Emergency Medical kits, including EMT kits, oxygen systems, and patient diagnostic/immobilization/transportation equipment.
- Recertified all operation's Emergency Medical Technicians.
- Procured an Automatic Electronic Defibrillator (one of only three known in the Arctic).
- Procured a winter rescue system including a Siglin Sled, full body splint, and self heating down exposure bag.

Mission Goal: Park visitors and the general public understand and appreciate the preservation of parks and their resources for this and future generations.

Long-term Goal: Visitor Understanding and Appreciation. By September 30, 2005, 86% of Gates of the Arctic visitors understand the significance of the Park and Preserve.

Annual Goal: By September 30, 2003, 82% of visitors understand the significance of the park and preserve (based on survey results).

GOAL EXCEEDED

Education and Outreach

Gates of the Arctic continued educational outreach in communities neighboring the park. Outreach and education efforts remain focused on engaging rural and urban middle and high school students on issues relating to Gates of the Arctic National Park and Preserve's significance and mission while complimenting teacher lesson plans and learning objectives. Themes included arctic animals, wilderness survival, the history and geology of Gates of the Arctic, and concepts of inhabited wilderness.

This year our interpretive specialist, Tina Copeland, teamed up with Education Specialist Linda Jeschke of Western Arctic Parklands to visit classrooms in the Kobuk River village of Shungnak. Outreach was also conducted in Anaktuvuk Pass, Wiseman, and for the first time in Fairbanks. Park Wildlife Biologist Jim Lawler presented his Anaktuvuk Pass Dall Sheep research findings to students in Fairbanks and the Wiseman community.



School children learn about arctic survival techniques.

New Visitor Center Opens in Coldfoot

The Coldfoot Visitor Center staff greeted visitors for the last time this summer from the small log cabin used since 1989, and moved operations to the new Arctic Interagency Visitor Center on July 16th. Cooperation between NPS, Bureau of Land Management and U. S. Fish and Wildlife Service provided for another successful season. The Visitor Center opened on May 26th and remained open through September 13th, for a total of 111 days. The park contributed the largest number of staff with two permanent employees and two volunteers.

Despite predictions for low visitation, more travelers made it to Coldfoot than ever before, increasing visitation 43.8% over last year. Independent travelers increased by 40.6%, and tour visitation increased by 52.7%, for a total of 6,765 visitors to Coldfoot (4,011 were independent!), up 43.8% over 2002, and the highest number of visitors recorded to date. Program attendance was also up by 22%. Concurrently, Alaska Natural History Association sales rose 37.6%, and donations were up 76.4%.

Recreational use of the Park via the Dalton Corridor is on the rise, with more backcountry hikers planning 3–10 day trips. Thirty-eight parties containing 112 individuals filed voluntary registration forms, an increase of 26.7% in parties, and 23% in individuals over 2002. This does not represent all visits to the Park from the Dalton, only those who registered. Additional staff this season allowed more one-on-one time with backcountry visitors, resulting in more thorough backcountry orientations. Backcountry orientation and registration incentives were a great success in getting visitors to attend orientations.

Bear resistant food containers supplied by NPS and recommended for travelers to Gates of the Arctic were well received. Currently we have 14 BRFCs available. The growing significance of this program increases with the rising grizzly populations in the central Brooks Range, and any help we can provide to visitors in keeping human food out of bears reach continues to be important.



Visitor Understanding and Appreciation Accomplishments:

According to a survey conducted by the University of Idaho, 97% of the visitors responding had an understanding of the Park's significance. Additionally, the Park:

- Performed educational outreach at schools in four neighboring communities. Visited 22 classrooms reaching 414 students;
- Responded to 437 visitor inquiries;
- Sent student handbooks to 127 students;
- Revamped the student handbook to be more engaging and understandable for younger students interested in Gates of the Arctic;
- Performed 2,013 formal and informal interpretive programs;
- Participated in the opening of the new Arctic Interagency Visitor Center.

Long-term goal: Volunteer Hours. By September 30, 2005, the number of Gates of the Arctic volunteer hours remains at 2,500.

Annual Goal: By September 30, 2003, the number of volunteer hours will be maintained at 2,500 hours.

GOAL EXCEEDED

Volunteers Offer a Big Helping Hand

Thank you volunteers for a job well done! Twenty-two volunteers worked a total of 2,972 hours this year, helping accomplish many meaningful projects:

- ❖ A full-scale clean up project on the upper John River;
- ❖ An archeological resource assessment of the Alatna River from the headwaters to the park boundary;
- ❖ The Brooks Range Impact Monitoring program;
- ❖ Staffing of the new Arctic Interagency Visitor Center in Coldfoot;
- ❖ Compiling information for visitors about birds;
- ❖ Participating in a variety of field and support endeavors.

Student Conservation Internship

The Student Conservation Association is a non-profit organization that provides young people with conservation



and stewardship skills, training and experience. This summer Kirtlye Lohoff, a Montana cowgirl and recent graduate of Lewis and Clark College in Portland, volunteered for a 12 week SCA internship at Gates of the Arctic. She took part in the cultural resources survey of the Alatna River (pictured here), the John River cleanup project, and a ranger patrol on the North Fork of the

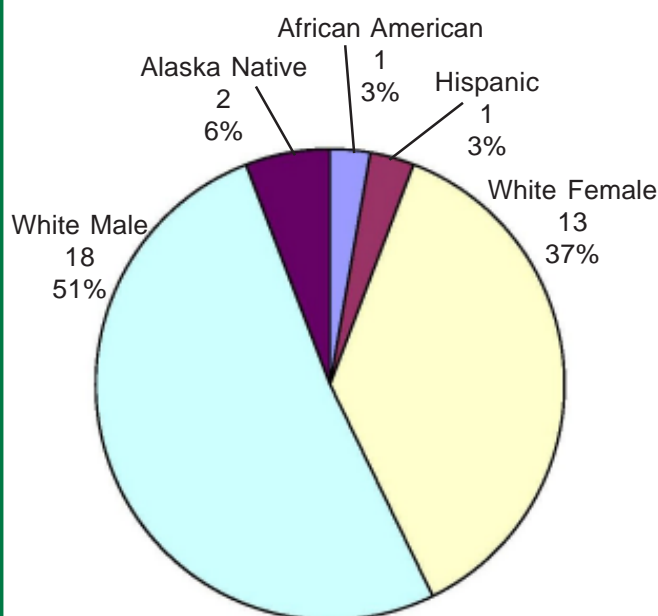
Koyukuk. According to Kirtlye "it was an amazing experience in every way. I learned a ton and hope to be back someday."

Ensuring Organizational Effectiveness

Mission Goal: The National Park Service uses current management practices, systems, and technologies to accomplish its mission.

Workforce Diversity of Permanent Employees

35 total employees



New Faces at Gates of the Arctic

Dennis Knuckles, Ranger Pilot

As a Ranger Pilot based in Bettles, Dennis supports the staff's operation by flying gear, surveys and staff throughout the park. He's worked in six national park units in Alaska over 20 years during his career. Dennis has flown in Alaska for 13 years and enjoys the bush setting.



Teri McMillan, Bettles Area Ranger

Teri began working for Gates of the Arctic in 2002 as the Office Manager for the Bettles Ranger Station and is excited to be the new Bettles Area Ranger. With her background in biology, she will be a great asset in contributing to both resource protection and scientific efforts. She also will be responsible for coordinating the approval and monitoring of Incidental Business Permits and managing employee safety as the Bettles Area Safety Officer and Hazardous Materials Coordinator.



Rachel Hanft, Visitor Use Assistant

Rachel is a resident hire at the Bettles Ranger Station. During the 2002 and 2003 summer seasons, Rachel served as the Visitor Use Assistant, and was recently hired full-time term. The job functions as the office manager for the field staff of Gates of the Arctic, which includes a variety of tasks such as visitor/student correspondence, flight scheduling, flight following, work duty scheduling, travel documenting, and general office functions. She also assists in visitor contact support through backcountry orientations and park presentations.



Jefferson Jacobs, Biological Inventory Coordinator

Jefferson began working for the Arctic Network Inventory and Monitoring program in September of 2003. His job involves compiling and analyzing data collected for the bird, small mammal and vascular plant inventories of the five arctic parks. This information will be used to update the NPSpecies database, and to provide background information for the upcoming monitoring efforts in Gates of the Arctic and the other arctic parks. Jefferson received his Masters from UAF studying the peregrines of the Fortymile River, and has lived in Alaska "off and on" since 1992.



Financial Summary

Operating Budget Base Allocations (ONPS) Expenditure Highlights

\$776,000 for Resource Preservation and Management

Both a moose survey and a nesting bird survey were completed and work was continued on winter assessment of furbearers and moose populations. A cooperative bear survey was completed with Fish and Game and we had a very successful clean up of the John River near Anaktuvuk Pass. This involved the cooperative efforts of park staff, Sierra Club volunteers, and the residents of Anaktuvuk Pass.

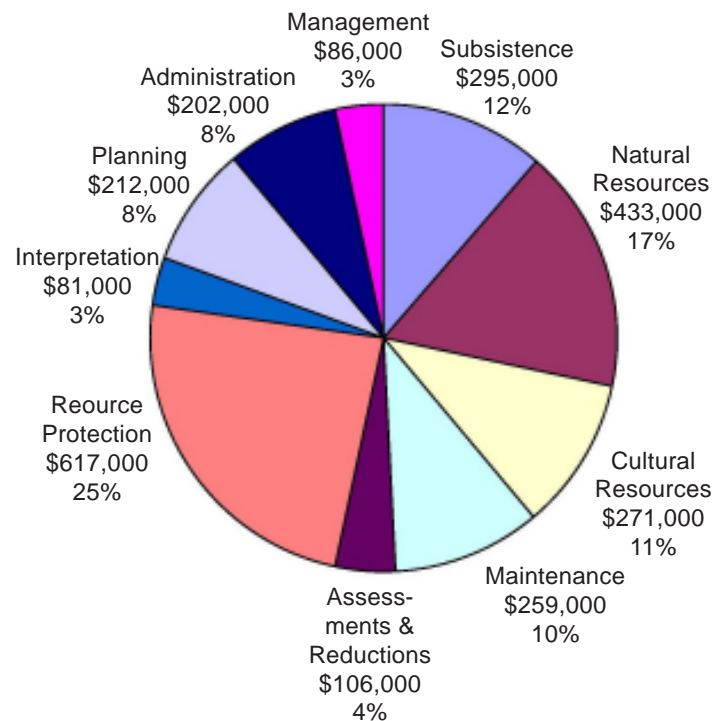
\$747,000 for Visitor Services

The new Interagency Visitor Center in Coldfoot opened this summer, which is a joint facility shared with the U.S. Fish and Wildlife Service and the Bureau of Land Management. Interpretive outreach programs were done during the winter in the neighboring communities of the park. We had no visitor injuries this year. We received a 97% satisfaction rating through the visitor survey being conducted by the University of Idaho.

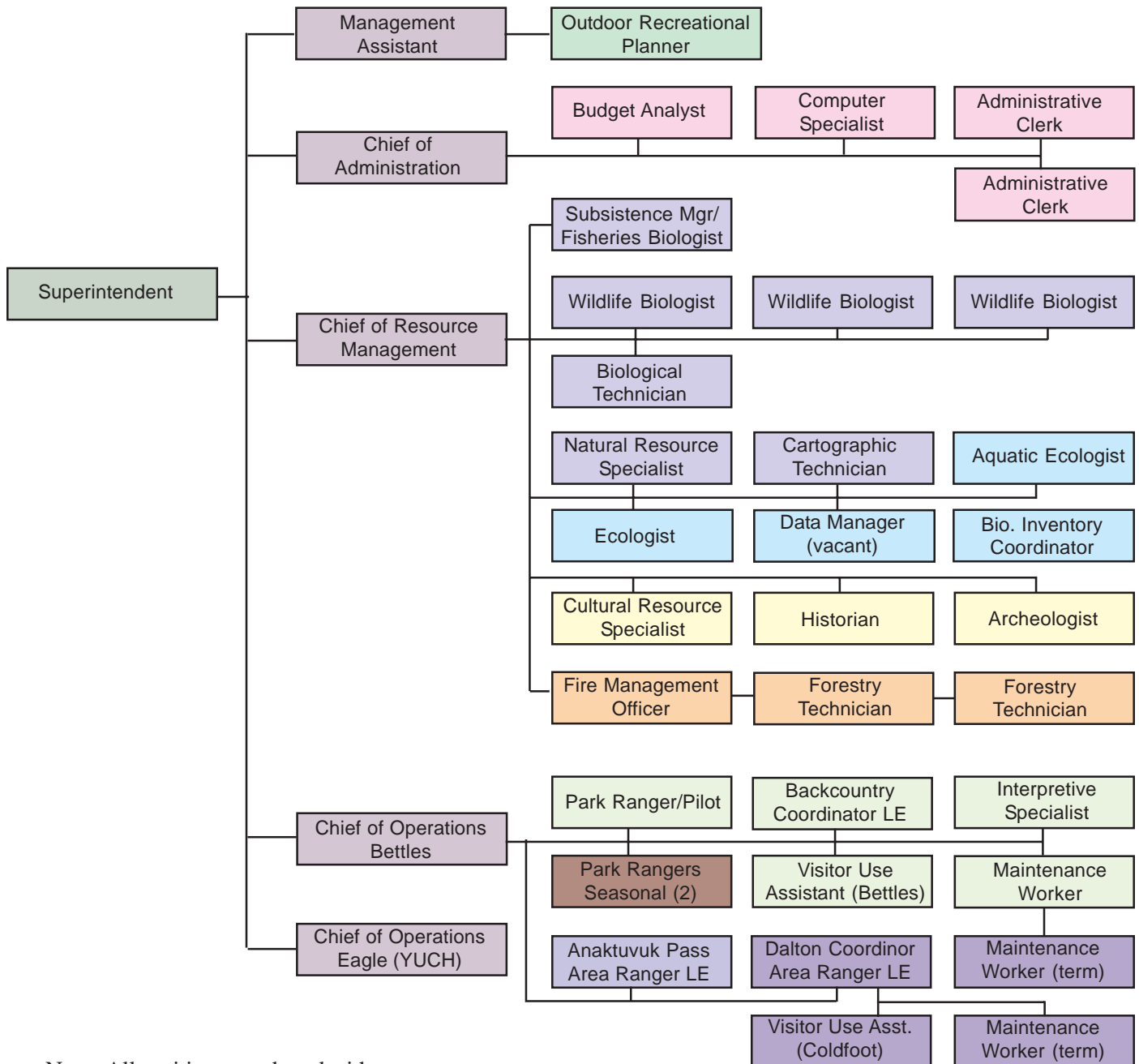
\$243,000 for Facility Operations and Maintenance

Housing rehabilitation was completed on three of the housing units in Bettles.

All Sources of Park Funding \$2,562,000 Total



Gates of the Arctic National Park and Preserve Organization



Note: All positions are shared with Yukon-Charley Rivers National Preserve except those under the Chief of Operations in Bettles.



Wildlife Biologist Nikki Guldager prepares a midnight meal on the bank of the Killik River in Gates of the Arctic National Park and Preserve before an early morning bird survey.

The National Park Service cares for special places saved by the American people so that all may experience our heritage.



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